ASSIGNMENT 11

Textbook Assignment: "Miscellaneous Equipment" and "Earthwork Operations," pages 14–22 through 15-37.

Learning Objective: Recognize the principles and components of floodlights, generators, and lubricators.

11–1. Floodlights used by the Naval Construction Force (NCF) are designed to operate in which of the following climatic conditions?

1. Dry
2. Wet
3. Cold
4. All of the above

11–2. You should NOT use a light plant as a power source for power tools because the power surge and power draw from the tools can overload the exciter and result in damage to the generator.

1. True
2. False

11–3. What is one of the first require–ments you must ensure is met before placing a light plant in operation?

1. Adequate ventilation is available
2. The unit is at a 30–degree incline
3. The unit is jacked up off the ground and level
4. All circuits are closed

11-4. If a light plant engine idles down while the generator is excited, what damage is likely to occur to the light plant generator?

1. The main fuse will blow
2. The clutch will overheat
3. The circuits will melt
4. The field winding will burn

11-5. Placing a generator near points of large demand provides which of the following advantages?

1. Reduces the size of wire required
2. Holds line loss (voltage) to a minimum
3. Provides adequate voltage control at the remote ends of the line
4. All of the above

11–6. A generator should NOT be operated on an incline that exceeds what maximum degrees from level?

1. 10
2. 15
3. 20
4. 25

11-7. A solid ground rod must have a minimum diameter of how many inches?

1. 1/4
2. 1/2
3. 5/8
4. 3/4

11-8. The ground rod is accountable collateral gear for a generator.

1. True
2. False

Learning Objective: Recognize the principles and components of lubricators, pumps, and sweepers.

11–9. When removing a grease gun from a fitting, you should take what action to avoid damaging the fitting or the grease gun coupler?

1. Twist the coupler to one side
2. Pull the coupler straight back
3. Work the coupler up and down as you apply backward pressure
4. Give the coupler a short, hard pull

11-10. Overgreasing equipment can cause damage to seals and packings.

1. True
2. False

11-11. What does the acronym MSDS mean?

1. Material Supply Dispatch System
2. Mud Slinging Drill System
3. Material Safety Data Sheet
4. Management Systems Design Specialists

11-12. A pump uses what type(s) of force to move liquid from one point to another?

1. Pushing only
2. Pulling and pushing only
3. Throwing and pulling only
4. Pushing, pulling, and throwing

11–13. What term is used to describe the part of a pump where mechanical motion is applied to the liquid being pumped?

1. Liquid end
2. Rotating end
3. Power end
4. Prime mover end

11-14. In a diaphragm pump, what force moves the liquid from intake to discharge?

1. Centrifugal motion
2. Rotary motion
3. Reciprocating motion of a flexible diaphragm
4. A rocking motion of a impeller

11-15. The mud hog and water hog are what type of pumps?

1. Centrifugal
2. Diaphragm
3. Rotary
4. Gear

11-16. Fluid entering the centrifugal pump is first directed in what location?

1. The diaphragm
2. The blades of the rotor
3. The center of the impeller
4. The splines of the fan clutch

11–17. When you are starting a centrifugal pump, the discharge valve should be in what position?

1. Open
2. Run
3. Stop
4. Closed

Learning Objective: Recognize the principles and components of sweepers and snow removal equipment.

11–18. A pull type of sweeper removes debris from a sweep area in which of the following ways?

1. By windowing debris to the side
2. By vacuuming up debris
3. By washing the debris
4. By pushing the debris straight ahead of the sweeper

11-19. You are planning to use a rotary street sweeper to sweep streets. You should check the availability of what sweeping requirement along the route?

1. Fuel
2. A place to dispose of debris
3. Water
4. Air

11–20. A magnetic sweeper has what components that help prevent damage to the sweeper when an obstruction is encountered?

1. A skid plate and spring
2. Heavy springs and a bumper
3. Wheels on each side
4. A swing arm and guide

11-21. Debris collected by a magnetic sweeper is dumped in which of the following ways?

1. By shutting down the engine
2. By releasing the collector hopper dump lever
3. By idling down the engine throttle
4. By shutting off the magnetic circuit breaker

11-22. Which of the following types of snow removal blades has a tapered moldboard formed to give snow a lifting, rolling action and can throw snow a considerable distance?

1. Reversible blade
2. Combination blade
3. Roll-over blade
4. "U"-blade

11-23. When you are plowing snow with a roll-over blade, the blade hoist lever should be in what position?

1. Float
2. Lowered
3. Raised
4. Hold

11-24. What action occurs when an object jams the blower?

1. The blower continues to chew at the object until it passes through the blower
2. The auger is spring-loaded back into position after the object passes
3. A shear pin breaks
4. A jaw clutch allows the auger to slip

11-25. You are operating snow removal equipment. To prevent picking up and blowing rocks, you should perform which of the following actions?

1. Install a rock rake in front of the blower
2. Stretch a length of chain across the bottom of the blade
3. Reduce the spring tension on the blower
4. Raise the blower a couple of inches off the ground

11-26. A motor grader can be used for snow removal on runways and taxiways.

1. True
2. False

11-27. When plowing snow, an operator can prevent the grader cutting edge from damaging the pavement surface by performing which of the following actions?

1. Keeping the cutting edges an inch above the surface
2. Keeping the grader at a slow speed
3. Replacing the cutting edge with a rubber strip
4. Reversing the blade

11-28. When removing piles of snow with a loader, you should take what action to ensure that no fireplugs are under the pile?

1. Use a pole to stick into the pile to check for obstructions
2. Check the utilities plan
3. Use a guide to look for the fireplug
4. Use the back of the bucket as a feeler

11-29. Which of the following types of sand effectively produces traction on iced surfaces?

1. Wet sand
2. Dry sand
3. Cold sand
4. Hot sand

11-30. What factor makes loose sand less effective than hot sand for gaining traction?

1. It may be blown off the surface by wind and traffic
2. It is difficult to spread
3. It freezes in the truck
4. It makes the ice more slick

Learning Objective: Recognize the principles of project planning.

11-31. Earthwork operation is classified as vertical construction?

1. True
2. False

11-32. Which of the following construction phases are documented in a standard nine-folder project package?

1. Initial planning
2. Execution
3. Closeout
4. All of the above

11-33. In a standard nine-folder project package, which of the following documents are placed in the right hand side of file Number 8?

1. Bill of materials
2. Resource leveled plan for manpower and equipment
3. Safety plan
4. Project plans

11–34. Step-by-step information on how a project package is developed is outlined in which of the following COMSECOND/COMTHIRDNCBINST?

1. 5200.2X
2. 1500.20G
3. 5100.1
4. 5600.1E

11-35. Which of the following functions does a project drawing NOT provide?

1. The basis for estimating material
2. Precise instructions for construction, showing the sizes and locations of various parts
3. Step-by-step instructions of how construction is to be performed
4. A means of coordination between the different ratings

11–36. A contour line is a symbol that shows an imaginary line that represents a constant elevation on the surface of the earth.

1. True
2. False

11-37. Which of the following dis-advantages occur when utility lines are ripped up?

1. Loss of project time
2. Increased project cost
3. People supported by the utilities are inconvenienced
4. All of the above

Learning Objective: Recognize the principles of earthwork computations.

11-38. Earthwork computations are the calculations of earthwork volumes used to determine which of the following factors?

1. The final grade
2. A balanced cut and fill
3. A plan for the most economical movement of material
4. All of the above

11-39. A cubic yard is 3 feet long, 3 feet wide, and what height, in feet?

1. 1
2. 2
3. 3
4. 4

11-40. In planning, which of the following conditions is NOT a state of condition considered when computing cubic yards of material?

1. In place
2. Wet
3. Loose
4. Compacted

11–41. What term is used to describe a selected layer of well–compacted soil that is placed in compacted lifts on top of the subgrade?

1. Crown
2. Base course
3. Surface course
4. Backslope

11–42. What term is used to describe the section of a ditch that extends from the outside of the shoulder to the bottom of the ditch?

1. Foreslope
2. Roadbed
3. Backslope
4. Travelway

11–43. A cross-sectional view of project prints displays the slope limits, the slope ratio, and the horizontal distance between the centerline stakes and the shoulder stakes?

1. True
2. False

Learning Objective: Recognize the principles of construction (grade) stakes.

11-44. Which of the following describes grade work?

1. Making cuts or fills with any limit of grade and alignment
2. Making cuts or fills to a definite limit of grade and alignment
3. Aligning survey stakes on a construction project
4. Taking the ground irregularities of a project and plotting them on a blueprint

11-45. A hub stake with a red or blue top is used for what type of grade work?

1. Finished
2. Rough
3. Profile
4. Alignment

11–46. A guard stake provides which of the following services?

1. Warns the oncoming traffic of construction ahead
2. Protects construction workers from traffic
3. Warns the operator that a flag is ahead
4. Provides a means of locating a reference point

11–47. What term is used to describe the reference mark on a grade stake that indicates the actual grade desired?

1. Arrowhead
2. Sheepsfoot
3. Crowfoot
4. All of the above

11–48. Stakes used on construction projects are normally marked in what unit (s) of measurement?

1. Feet only
2. Feet and tenths of a foot
3. Meters only
4. Meters and centimeters

11-49. To convert tenths of a foot to inches, you multiply the decimal fraction by what number?

1. 6
2. 8
3. 10
4. 12

11-50. Which of the following station numbers identifies the starting station?

1. 0 + 00
2. 1 + 00
3. 10 + 00
4. 100 + 00

11–51. A grade stake station that ends with the number 00 is known by what term?

1. Even
2. Plus
3. Full
4. Midway

11-52. What type of stake marks the horizontal location of earthwork and gives the direction of the proposed construction?

1. Centerline
2. Line
3. Shoulder
4. Slope

11-53. Rough alignment stakes are used for what purpose?

1. To mark the project boundaries
2. To mark trees that are not to be cleared
3. To mark the control points for the survey crew
4. To mark the straightaway

11–54. What information is written on the front of a centerline stake?

1. Change in elevation
2. Crowfoot
3. Station number
4. Offset information

11-55. On a road project, a grade stake with the symbol SH should be placed at what location?

1. On a line parallel to the center line
2. Not more than 20 feet from the center line
3. Only on the back side of a fill or cut stake
4. On the back side of the centerline stake

11-56. What information should be marked on the face of a shoulder stake that is facing the center line of a road?

1. Cut and fill data
2. Station number
3. Distance across the road
4. Right-of-way data

11-57. What term is used to describe raising the elevation of the ground?

1. Raise
2. Lift
3. Fill
4. Elevation adjustment

11-58. A stake marked "OF 65′ CL C-3.5" means that the stake is offset what distance from the centerline stake?

1. 3 feet
2. 3.5 feet
3. 65 feet
4. 68.5 feet

Learning Objective: Recognize the principles and components of leveling equipment.

11-59. A hand level is NOT used at distances that exceed what number of feet?

1. 20
2. 30
3. 40
4. 50

11-60. When used for alignment, a dumpy level is accurate at distances up to how many feet?

1. 1,000
2. 2,000
3. 3,000
4. 4,000

11–61. A compensator on a self-leveling level automatically places the line of sight horizontal.

1. True
2. False

11–62. When placing a leveling instrument on a tripod, you should torque the instrument down until it binds to the screw threads.

1. True
2. False

11-63. Each foot on a Philadelphia rod is subdivided into what fraction of a foot?

1. Tenth
2. Hundredth
3. Thousandth
4. Ten–thousandth

11-64. The indicators for foot measurements on a Philadelphia rod are what color?

1. White
2. Black
3. Red
4. Brown

11-65. What person makes the rod reading when a target is used?

1. Levelman
2. Rodman
3. Signalman
4. Targetman

11-66. What term is used to describe a reference point whose elevation is known and marked?

1. Datam plane
2. Mean sea level
3. Bench mark
4. Backsight

11-67. To determine the height of the instrument, you add the bench mark elevation to what reading taken from the level rod?

1. Mean sea sight
2. Sidesight
3. Foresight
4. Backsight

11-68. The height (HI) of the instrument is 136 feet. The foresight (FS) reading is 4.5 feet. What is the elevation at the foresight reading?

1. 91 feet
2. 132.5 feet
3. 140.5 feet
4. 171 feet

11-69. In setting or replacing grade stakes, you should measure horizontal distance with which of the following types of tapes?

1. Metallic woven
2. Nonmetallic woven
3. Steel
4. All of the above

11-70. Which of the following incremental markings are on a steel surveyor's tape?

1. Feet, tenths of a foot, and hundredths of a foot
2. Feet, tenths of a foot, and yards
3. Yards, feet, and hundredths of a foot
4. Feet and yards only

Learning Objective: Recognize the principles of soils.

11-71. A poor foundation eventually causes roads, runways, buildings, and other temporary or permanent structures to collapse.

1. True
2. False

11-72. What soil layer is lighter in color and is composed of sand, gravel, silt, and clay?

1. A-horizon
2. B-horizon
3. C-horizon
4. D-horizon

11-73. Which of the following soils has good load-bearing qualities and drains freely?

1. Organic
2. Fine grained
3. Medium grained
4. Coarse grained

11-74. Which of the following advantages are reasons soil stabilization is important?

1. Strength improvement
2. Dust control
3. Soil waterproofing
4. All of the above

11-75. When computing the amount of cement required for a soil stabilization project, you should use what rule of thumb?

1. One 50-pound bag for every cubic yard
2. One 50-pound bag for every square yard
3. One 50-pound bag for every cubic feet
4. One 50-pound bag for every square feet